BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

THE USE OF RADIOTHERAPY IN ACUTE PYOGENIC INFECTIONS

JOHN D. LAWSON, M. D. (Woodland Clinic, Woodland).—The treatment of acute pyogenic infections through the use of radiotherapy is not new, but recently has received considerable attention with the result that it has come into more general usage.

The more common acute infections in which roentgen therapy has been utilized with success are erysipelas, furunculosis, carbuncles, cellulitis, lymphadenitis, lymphangitis, parotitis, and acute pelvic inflammatory disease. In all of these conditions we find a rather remarkable response to the use of this physical agent, provided the disease has not progressed to suppuration.

If necrosis has already occurred and the lesion has become entirely localized, it has not been our experience that any favorable results are obtained. If, however, extension is continuing about a necrotic area the effect of radiotherapy is quite satisfactory as it will inhibit further progression.

In the treatment of acute pyogenic infections by means of roentgen rays the point of first importance is the selection of cases. This mode of therapy will certainly come into disrepute if attempts are made to produce results in instances where necrosis and suppuration have already occurred.

The response to irradiation in all of the disorders noted above is prompt and satisfactory. It is true that certain lesions respond more rapidly and more readily, as would be expected by reason of the involved tissue. In cases of adenitis where recovery is quite remarkable and regression of the glands very rapid, this would be expected by reason of the type of structure in which the infection is located, as one would normally expect more rapid regression than where the skin is involved as in erysipelas. However, taking the group as a whole, it may be said that radiotherapy is the treatment of choice and that the results obtained by this method are not approached by any other type of treatment.

In administering radiotherapy it has been our efforts to apply a dosage of approximately one-third of an erythema dose. By this is meant that the lesion itself receives that amount of radiation. If the infection is located a considerable distance below the surface, as is the case in pelvic inflammatory disease, heavy filtration and high kilovoltage will be necessary. If the lesion is located on the skin, little or no filtration and much lower kilovoltage may be utilized. It is very essential that a zone about five centimeters wide be allowed beyond the farthest extension noted and included in the irradiated area. If radiation is limited to the lesion itself a high percentage of patients will have further extension, whereas if the application includes the larger area this will not occur.

It has not been our practice to reirradiate within forty-eight hours, but if the lesion has progressed and there is still no evidence of necrosis at the end of that time the same dosage is repeated.

As stated before, the results obtained in this field are such as would convince the most skeptical, and it has been routine at the Woodland Clinic for several years to refer all acute nonsuppurative pyogenic infections to the radiotherapy department for treatment.

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MOSES SCHOLTZ, M. D. (1930 Wilshire Boulevard, Los Angeles).—The term "radiotherapy" colloquially implies x-rays and radium, and strictly speaking it should also comprise the superficial actinic modality of the ultra-violet ray. Pyogenic infections of the skin naturally divide into two groups, superficial and deep. The superficial infections of the skin are represented by various types of pyodermias, such as pyogenic intertrigos, impetiginous streptococcic dermatitides, perleche, and common impetigos.

Of the deep skin infections most common are furuncles, carbuncles, ecthymas, erysipelas, cellulitis, and lymphadenitis.

Ultra-violet ray possesses a distinct local bactericidal effect, but its action is extremely superficial and is stopped by the thinnest sheet of paper tissue or pathologic deposit, such as crust, scab, scales, etc. Hence the ultra-violet ray can be useful only in the most superficial forms of pyodermias. Even then, to insure bactericidal effect it is absolutely necessary to clean the lesions of all pathologic deposits.

X-ray has no direct bactericidal effect, yet through some unexplained alterative effect on tissues has an inhibitive effect on bacteria, and fungi. The powerful absorptive action of x-ray on pathologic infiltrates and granulomata strongly enhances this inhibitive effect.

X-ray is essentially indicated in deep types of infection. It has been successfully used for a long time in deep mycotic and bacterial granulomata. Lately its successful use has been reported by several observers in acute and subacute pyogenic deep infections.

The prompt diminution of the pain and prompt resolution with or without suppuration and abscess formation has been confirmed also in my

personal experience in cases of furuncles, carbuncles, suppurative adenitis, and erysipeloid infiltrations.

X-ray radiation can be expected to effect a resolution only in the very early stages before the central necrosis or abscess formation takes place. The dosage is one-fourth, one-third and up to half of the skin unit with filtration, varying from half a millimeter to one or two millimeters of aluminum in deep hypodermic infections.

X-ray radiations should be given rather tentatively once or twice, two or three days apart, and if favorable reaction does not ensue in twenty-four or forty-eight hours, radiation should not be persisted in.

It is also important that x-ray should not be used as the sole therapeutic measures. All local, except highly irritating antiseptics or caustics and systemic measures indicated in individual cases should be applied.

In conclusion it can be stated that the use of x-ray in acute pyogenic infections has not as yet passed through the experimental stage and should be used with great conservatism. In selected cases highly satisfactory and at times spectacular results are obtained.

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HARRY E. ALDERSON, M. D. (490 Post Street, San Francisco).—There is little to add to the discussion of Lawson and Scholtz, whose remarks correctly present the latest ideas on the subject. It is true that roentgen therapy of various pyogenic infections of the skin is effective if used very early in the proper dosage and with sufficient filtration. However, in the case of erysipelas our experiences have been disappointing. Perhaps it is because so many cases do not present themselves until they are too far advanced. Certainly one should be very careful in selecting one's cases for radiotherapy. Recently I saw a severe complicated example of carbunculosis which a surgeon had had a roentgenologist treat. The disappointing results and, consequently, prolonged illness of the patient may be attributed to the poor judgment of both physicians who failed to examine their patient who had diabetes and other serious underlying troubles. Attention to these latter conditions and one or two injections of typed bacteriophage locally and into the lesion would have given prompt and definite relief. Probably very early roentgen therapy along with constitutional care would have been beneficial too. It is perfectly true, as Lawson states, that injudicious selection of cases will bring the method into disrepute. It cannot be emphasized too strongly that the x-ray treatment should be applied *very early*.

Scholtz correctly includes ultra-violet therapy under this heading, although its use is limited to the most superficial pyogenic processes. However, there are so many other therapeutic procedures that are more promptly effective that I rarely resort to its exclusive use in these conditions.

Thirty-Three and One-Third Per Cent Reduction of Medical Fees.—Never before have we seen such world-wide economic depression, and so far we have not been able to fine any "old timer" who can remember a similar or worse period in world affairs. Let it be understood that this editorial is in no sense political. The fact that ye editor is a democrat has nothing to do in any way with the free and frank discussion of the matters presented. It may be difficult for some overzealous partisans to eliminate the political aspect, but we must consider the depression as applying to the whole world. Space does not permit a review of the conditions in Australia, South America, Germany, England, and elsewhere, but all honest men admit the seriousness of these world conditions. Who is to blame for all this unhappiness, misery, and starvation is not the question we are considering.

What we wish to consider is the proper, just, and honorable position of the medical profession in relation to the cost of medical services. Every well-informed person will readily admit that most of the great corporations have sustained losses of at least 33 to 50 per cent in their business values. That wealthy people have had, as well as these corporations, reductions in their capital assets and in their incomes of one-third to one-half is common knowledge. This also applies to farmers, stockmen, sheepmen, cotton growers, and to all classes of merchants. The profit is all gone, and losses are universal.

Politicians and labor leaders, to hold their jobs, advocate no cut in wages in order to maintain the present high standard of American living. Deep in our hearts we all know this is an erroneous statement. The union bricklayer who received $14 per day, a year or five years ago, can live under the present prices for all necessities of life just as well on $8 or $10 per day when he can purchase flour at $1.25 per fifty pounds, whereas a short time ago he paid $3 for the same. The same applies to all classes of commodities such as groceries and clothing, and to most other expenses. It is true that some things have not come down in price, but they will have to do so before any permanent prosperity can be universal. Under the above world conditions it seems no more than just that the fees for medical services be cut by 33⅓ per cent.

Your editor realizes that such a proposition is not and will not be a popular thing to advocate. The wrath of some members of our profession will fall upon his head, but the justice of such a move cannot be denied if we honestly consider economic conditions existing today. That a flat cut of one-third is much better than secret cuts which are at present going on all through the medical profession, is self-evident. The idea of a voluntary reduction of all fees by the medical profession may not be pleasing to consider, but we believe such a move is the only way to meet the conditions of today. It seems more fair for all to reduce our prices than to cut them secretly behind each others' backs.—*Colorado Med.*, October, 1931.

Grading of Hospitals Considered Necessary.—Should hospitals be graded in such a way that the Department of Health could take the position that, regardless of the qualifications of the operating surgeon, certain hospitals should be limited in their scope of operations? The Council of the College of Physicians and Surgeons is of the opinion that a most thorough system of hospital inspection should be inaugurated by a medical practitioner and not by a nurse, and that no definite action should be taken until such inspection has been completed, compiled and properly considered. In order to induce a greater number of pregnant women to make use of hospital facilities for maternity patients many Alberta hospitals are making a flat rate for a twelve days' stay in hospital, including case room, drugs and dressings, and are finding this very satisfactory and in the interest of the patients.—*Canad. M. A. J.*, September, 1931.